

**TIME DIVISION MULTIPLEXING OF INTER-SYSTEM CHANNEL
DATA STREAMS FOR TRANSMISSION ACROSS A NETWORK**

Abstract of the Disclosure

A time division multiplexing (TDM) facility is presented for time division multiplexing at least two inter-system channel (ISC) data streams to create a TDM multiplexed data stream. The TDM multiplexed data stream can be forwarded across the network over a single wavelength of a wavelength division multiplexing (WDM) network. The TDM multiplex data stream may be wavelength division multiplexed with one or more other TDM multiplexed data stream. Different protocols are presented for maintaining disparity balance within the ISC data streams depending upon whether a given sequence in one of the data streams is an idle sequence, frame sequence or continuous sequence.